

### ABSTRACT

A weather radar display system is disclosed. The weather radar display system comprises a weather radar antenna, processing electronics, coupled to the weather radar antenna, enhancing weather radar returns based on a  
5 reflectivity model which differentiates lower level activity from higher level activity when the weather activity is detected from weather systems at long range and the reflectivity using short range thresholds would display only higher level activity. A weather radar display displays multiple colors representative of the different levels of weather activity based on the enhanced returns.